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A Report On The Safety And Therapeutic Effectiveness Of Parenterally Administered Chloromycetin By The Intramuscular And Intravenous Routes

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Oral chloromycetin is well-recognized as an antibiotic of rather broad therapeutic range in regards to bacterial, viral, richettsial, and spirochetal infections, and as one with marked specificity for certain of the salmonella group of organisms.[1]

Recently, this drug has been prepared for intravenous administration by dissolving it in acetyl dimethylamine. It is prepared in ampoule form in a concentration of 0.5 gram per 2 cc. of solvent.† For intravenous use this preparation may then be added to solutions of 5% glucose in physiological saline solution, or to solutions of glucose and distilled water, in proportion of 0.5 gram to 1 gram of chloromycetin, per 2 to 4 cc. of acetyl dimethylamine per 250 to 500 cc. of glucose or saline solution, and at this dilution strength it may be given intravenously very safely. To date, we have employed chloromycetin intravenously in 11 patients and have observed no ill effects. Therapeutic blood levels were maintained after such intravenous administration for periods of 6 to 8 hours with 0.5 and 1 gram doses.

Observations made at regular intervals after both the 0.5 gram and 1 gram doses revealed that after 6 hours the serum concentration of the drug fell off very sharply to levels below those theoretically desirable for therapeutic reasons. As a result of this sharp fall in concentration after six hours it appears desirable that the drug be given by this route at repeated intervals of at least every six hours.

In so far as the intravenous route for the administration of chloromycetin in adequate dosage also necessitates the giving of rather large volumes of fluid, a feature which at times is not desirable, an effort has been made to evaluate the rapidity of absorption, blood level concentration, therapeutic effect, toxicity, or other possible deleterious effects that might result from the use of the drug by the intramuscular route. To date, 34 patients have been treated for various infections with chloromycetin administered intramuscularly. The same preparation as used for intravenous administration was employed. It was not diluted but given directly by intramuscular injection upon withdrawal of the solution from the ampoule.

In each instance the deltoid and/or the gluteal muscles were used routinely for the sites of injection. There was an immediate but transient, and only slightly uncomfortable sensation at the time and site of administration; #21 or #22 gauge intramuscular needles were employed. The immediate discomfort was no more than that usually observed with other drugs given by this route. One patient developed a sterile abscess at the injection site (deltoid); this was due, we believe, from failure to inject the solution deeply in the muscle. This was the only patient to manifest any untoward reaction, either local or systemic. In none of our patients has evidence of bone marrow depression, neutropenia or evidence of renal or hepatic toxicity been encountered from the use of this drug parenterally.

A variety of infectious diseases were treated: recurring parotitis (1), specific infectious arthritis, due to Beta hemolytic streptococcus (1); lymphopathia venereum (2); pneumonia; pneumococcal (1), tuberculous (2), monilia (1), pneumonia, of mixed bacterial types (17); urinary infection, due to E coli (2), idiopathic ulcerative colitis (1), murine typhus (1), peritonitis mixed organisms (2); infectious mononucleosis (1), otitis media (mixed infection) unresponsive to Penicillin (1), paratyphoid fever B (1). These patients were treated over periods of time

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†Supplied by Parke, Davis and Company to us in this form for this study.

ranging between four days and three weeks. The ages of the patients varied from 7 months to 75 years of age. The clinical responses observed determined the duration and intensity of the individual therapeutic attempt. In most instances the response to intramuscular chloromycetin was satisfyingly prompt. The only exceptions were one patient with lobar pneumonia, who responded less rapidly than anticipated (a specific bacterial diagnosis was not obtained in this case); two patients who, on further study, were found to have pulmonary tuberculosis also were therapeutic failures; and lastly, a moribund patient with generalized peritonitis who died within 36 hours of starting the drug.

Serum concentration levels of chloromycetin were determined by the microbiological assay method; Shigella sonnei being the test organism used.[2]

The average concentrations of the serum chloromycetin levels that we have observed following the oral, intravenous, and intramuscular administrations of this drug may be seen by reference to TABLE I. As may be seen from this, good therapeutic levels were obtained within two hours time after intramuscular injections. The levels were not materially in excess of those that were observed with comparable doses given orally, however.

Interestingly enough, both the oral and intramuscular routes showed the same phenomenon of the levels rising to their maximum concentrations up to the 6th hour after administration, and then falling off sharply in the next 2 hours. By repeating the maintenance dose, either orally or intramuscularly, at 6 hour intervals, usually 250 milligrams, a sustained level of 5 micrograms per cc. could be maintained day after day. Longer intervals between injections resulted in a decrease in concentration below that theoretically desirable. The intravenous concentrations fell off more sharply after the 4th hour, thus indicating that with this route Q 4 h administration must be employed if very high levels are desired.

As examples of the types of clinical responses that have been observed with the parenteral administration of chloromycetin, the following five case reports are cited as appropriate illustrations. The first three of these patients were treated with intramuscular chloromycetin and the last two patients were treated initially with intravenous chloromycetin and maintained by intramuscular administration of the drug.

CASE REPORT: #1 J. T., a 72 year old white male was admitted to the hospital with a generalized macular erythematous eruption and a temperature elevation of 102°F. His chief complaint was generalized aching. The blood cultures were negative. WBC= 16,100; RBC= 4,050,000; Hbg. 14.0 grams. Agglutination tests with proteus OX-19 and OX-2 gave high titre agglutinations. With OX-2 a titre of 1:7120 was reported. Later complement fixation tests were also found to be positive for murine typhus. Before a diagnosis of murine typhus had been established penicillin in adequate dosage had been employed without any evident response. Chloromycetin was started the third hospital day, 0.5 gram every 4 hours for 7 doses were given, and then 250 milligrams every 4 hours for 5 days were given. After this time the drug was continued at intervals of every 6 hours for 6 more days. In all there were 12 days of therapy; initial blood chloromycetin levels averaged 6 to 10 micrograms per cc. with a maintenance level of 5 micrograms per cc. Within 36 hours the patient showed symptomatic improvement and his temperature returned to normal and remained so. There was no relapse after discontinuing therapy, and he was discharged symptom-free and without sequelae after 21 days.

CASE REPORT: #2 C. H., a 13 year old colored female was admitted to the hospital with a painful, swollen and inflamed right shoulder joint. Her temperature was 102°F. Laboratory studies revealed WBC= 15,550; Hbg=11.0 grams; RBC= 4,460,000; urine essentially normal. Upon aspiration of the joint purulent fluid was obtained from which a Beta hemolytic streptococcus was cultured. Intramuscular chloromycetin was given in a dosage of 250 milligrams every 6 hours for 6 days, then every 12 hours for 2 days; the maintenance blood level of chloromycetin was 5 micrograms per cc. The joint was free of pain and swelling after 48 hours, and she was completely afebrile in 72 hours. There was no relapse subsequent to discontinuing the drug and she was discharged as cured.

CASE REPORT: #3 W. S., a 51 year old white male was admitted to the hospital with the complaint of severe abdominal cramps, with diarrhea accompanied by severe tenesmus. Stool cultures were positive for Salmonella Schottmuelleri. He was treated with intramuscular chloromycetin, 250 milligrams every 4 hours for 5 days. No oral chloromycetin was given, it being desired to determine if the parenteral form of administration would prove as efficacious as the oral route is known to be in this type of infection. Within 36 hours tenesmus and diarrhea decreased. Coincident with symptomatic improvement the stool cultures became negative. Repeated stool cultures 2 weeks after discontinuing therapy were free of Salmonella Schottmuelleri and the patient was discharged. Follow-up in the Outpatient Clinic has revealed no clinical or bacteriological relapse over a two month's period.

CASE REPORT: #4 M. M., a 28 year old colored male admitted to the Roper Hospital with a history of cough, chills and fever of four days duration, with pleural type pain associated with respiration. Physical examination revealed the temperature to be 103°F, and the classical signs of a right lower lobe pneumonia; confirmed by x-ray. Initial laboratory findings were: WBC= 14,350; RBC= 4,050,000; differential smear revealed 85% polymorphonuclear leucocytes and 13% lymphocytes. A sputum culture revealed

Streptococcus viridans and M. catarrhalis.

Treatment consisted of an initial dose of 1 gram of chloromycetin given intravenously at 8 hour intervals for 2 doses, then 250 milligrams was given orally every 6 hours; initially we obtained blood levels of chloromycetin of 8 to 10 micrograms per cc., then maintained a level of 5 micrograms per cc. This was continued for one week. Symptomatic improvement was noted within 24 hours and the patient's temperature was normal, and remained so 36 hours after treatment was initiated. The patient was discharged after a rapid and uneventful recovery.

CASE REPORT: #5 M. M., a 49 year old colored female was admitted to the hospital with pain in the chest associated with respiration, cold and cough of 2 days duration. The temperature was 103°F. Impression by physical examination, substantiated by x-ray of chest, revealed a right middle and right lower lobe pneumonia. WBC 14,000, Hbg. 8 Grams.

Therapy instituted was 2 grams of chloromycetin intravenously initially, then 1 gram intravenously every 6 hours for three doses totalling 5 grams by this route during the first 24 hours. The patient was then maintained on 0.5 gram of chloromycetin every 6 hours orally. In this case our initial blood level of chloromycetin was above 20 micrograms per cc. and subsequently, maintained at 5 to 7 micrograms per cc.

Her response was dramatic. The temperature fell to normal within nine hours after therapy was instituted. She was discharged completely recovered after 10 days.

SUMMARY AND CONCLUSIONS

An evaluation has been made of the clinical and therapeutic effects and of the serum levels of chloromycetin that are obtained when this drug is administered parenterally by intravenous and intramuscular routes. The study comprises our experience to date in a total of 38 different patients, some of whom received the drug by both parenteral routes.

To date, in our limited experience, we believe that we have demonstrated that chloromycetin when dissolved in acetyl dimethylamine may be safely administered intravenously or intramuscularly. As yet, no ill effects by these parenteral routes, such as allergic or toxic reactions, have been observed by us. Neither have signs of bone marrow depression, neutropenic reaction, or evidences of hepatic or renal damage been observed in the patients we have treated. Chloromycetin has been administered to some members of this group of patients for as long as 3 weeks by intramuscular injection with no evidence of sensitization or toxicity developing in any during that period of time. Infants and aged individuals as well as young adults comprised the members of the patient group. It also is evident from our observations on 34 patients that chloromycetin when dissolved in acetyl dimethylamine can be administered in undiluted form intramuscularly without adverse local effects. The usual dose employed was 0.5 to 1 gram with additional doses of 250 milligrams to 0.5 gram as a maintenance dose at 6 hour intervals. Precautions to give the preparation deeply in the muscle should be taken to insure against local tissue necrosis and also to reduce the patient's discomfort at the time and site of injection. Adequate therapeutic blood levels were maintained by this means of administration.

This is the first reported instance wherein this type of chloromycetin solution has been employed for intramuscular use. It is obvious that this finding will extensively broaden the use of chloromycetin as an effective therapeutic agent.

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(2) The Method for Microbiological Assay and the Test Organism, Shigella sonnei were furnished us through the courtesy of Parke, Davis and Company.

TABLE I

Dose and route of Administration	TIME (HOURS) Post Administration Concentrations in Micrograms per c. c.							
	1	2	4	6	8	24	Maintenance levels c Q6h Doses	REMARKS
1 Gm. I. V.	20	16	14	4.5	1.25	0		Average levels in 6 patients
.5 Gm. I. M.	1.25	2.5	5	5	2.5	0	5-6 mcg/cc	15 patients
.5 Gm. Orally	1.25	2.5	2.5	5	2.5	0	5 mcg/cc	10 patients
250 mgm. I. M.	1.25	2.5	2.5	5	2.5	0	3-5 mcg/cc	4 patients
250 mgm. Orally	1.25	1.25	2.5	5	1.25	0	3-5 mcg/cc	5 patients

Common Pitfalls In Surgical Anesthesia

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Surgery is ofttimes complicated by alarming and, frequently, serious problems arising from anesthesia.[1] The anesthesiologist, a physician with special postgraduate training in anesthesia, can assume the initiative under such circumstances, yet, whenever such an individual is not available, the surgeon in charge of the patient must bear this additional responsibility.

Meticulous attention, however, to certain details of the operative period can eliminate some of the anesthesia "pitfalls" just as certainly as strict adherence to established surgical principles can prevent subsequent surgical complications.

The simple classification of "minor and major operative procedures" does not hold true in anesthesia. This is because of the fact that each anesthetic agent, regardless of its reputation for safety, if improperly employed, may produce damage to some vital system of the body.[2] In fact, the "whiff of gas," "squirt of Pentothal," or "few drops of ether" can produce a greater morbidity and mortality than the anesthesia in many "major" cases wherein one usually anticipates the worst complications and practices adequate preventive medicine.

PREOPERATIVE STUDY

Many serious "pitfalls" occur from inadequate preoperative study and preparation of the surgical patient for anesthesia. One is prone to forget that such factors as nervous tension and accidental trauma greatly increase the emptying time of the stomach,[3] and that a gastric tube may require hours instead of minutes to aspirate all gastric contents.

Routine laboratory work occasionally reveals that the hemoglobin is less than 12 grams. In many institutions today, this degree of anemia contraindicates any elective surgery until the condition is corrected by the appropriate medical regimen or by transfusion therapy.

The discovery of certain pathological processes within the body precludes the use of some of the anesthetic agents because of their pharmacological actions. For example, wide clinical experience has shown that asthmatic patients do not tolerate the thiobarbiturates or cyclopropane in high concentrations; that chronically-ill patients with electrocardiographic evidence of toxic myocarditis do not tolerate suboxygenation with nitrous oxide. A history of coronary insufficiency contraindicates spinal anesthesia because of possible hypotension, and the presence of acetonuria in an acutely-ill, dehydrated child contraindicates ether anesthesia because of the possibility of acidotic convulsions.

A history of allergy is of importance since reactions to certain regional anesthetic agents occur as a result of cross-sensitivity to other compounds with chemically similar molecules. These examples, and many others, illustrate the fact that adequate preoperative study and preparation of the patient are essential to uneventful anesthesia throughout surgery.

PREMEDICATION

Preoperative medication of the patient is frequently the cause of anesthetic complications.[4] Excessive mucous formation, bronchospasm, poor muscular relaxation, overdosage of anesthetic agent, apnea, and ventricular fibrillation are some of the "pitfalls" which may result from improper medication. Most authors believe that all patients should receive premedication in a therapeutic dosage at least one hour before induction of anesthesia to assure maximum absorption of the drugs from the subcutaneous or intramuscular depots. The practice of routinely ordering drugs "on call to the O. R." is likely to lead to some of these complications.

A suitable preoperative routine includes a short-acting barbiturate the night prior to surgery, again on the morning of surgery if necessary for hypnosis, and an opiate and belladonna derivative in a 25:1 ratio, one hour before surgery. An obese patient does not require more premedication than a slender one. In fact, his metabolic rate is likely to be lower on an endocrinlogical basis, and thus require less medication.

Pediatric patients[5] and geriatric patients[6] tolerate small dosages of the opiates as well as young healthy adults, if the reflex irritability of these individuals is taken into consideration when arriving at the dosages. Chronic alcoholics are adequately sedated with paraldehyde in large dosage. Drug addicts and patients who are in shock are best premedicated by slow, symptomatic, intravenous injection.

ANESTHETIC AGENT AND TECHNIQUE

The choice of an anesthetic agent and technique may appear to be the most important consideration in sidestepping various "pitfalls." This is true to a certain extent, yet in arriving at this decision, several related factors must be taken into consideration. The pharmacology of the anesthetic agents, the potential dangers of certain techniques, the clinical experience of the individual administering the anesthetic, and

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the specific requirements of the surgery are all very important considerations. Quite often, more than one agent or technique may be used with equal advantage. For example, regional anesthetic methods are preferable in diabetes mellitus, yet inhalation anesthesia is equally as safe if one employs rational therapy to correct the specific metabolic disturbances produced by the anesthetic agent in the presence of diabetes.

Paraldehyde may be administered safely by the oral or rectal route for basal narcosis, yet intravenous administration produces multiple, small, pulmonary emboli manifest by violent coughing attacks. Chloroform as an obstetrical *analgesic* agent has withstood a century of usage; as an *anesthetic* agent, it has been discarded. Certainly we have safer anesthetic agents than the ultra-short acting barbiturates for operations upon the respiratory passages such as tonsillectomy and bronchoscopy!

Therefore, only after careful consideration of all of the various factors involved in any specific case can one select the appropriate anesthetic agent and technique.

POSTOPERATIVE PERIOD

The annexation of the immediate postoperative period is said to be one of the greatest tasks which anesthesiologists have undertaken. Without a doubt, most anesthetic deaths immediately following surgery are due to respiratory obstruction originating from deeply anesthetized patients "swallowing the tongue." Of course, this is anatomically impossible, yet the relaxation of the various muscle groups which support the tongue permits it to fall against the posterior pharyngeal wall and occlude the glottic aperture. Death may result within a few minutes if the obstruction is not relieved. A judiciously placed airway or simple manual elevation at the angle of the mandible can easily prevent this from occurring.

Shock frequently occurs in the immediate postoperative period. Experimental work has shown that it frequently becomes necessary to replace not only the amount of blood which is lost during a surgical procedure, but even more because of undue surgical trauma. Various laboratory data and the clinical appearance of the patient will usually lead to some rational approach to shock therapy under these circumstances. Quite often, .5 mg. of neosynephrine hydrochloride, intravenously, will elevate and sustain the blood pressure when it is due to neurogenic peripheral vasodilation.

Morphine produces severe, postoperative smooth muscle spasm in some patients when used for sedation following anal operations and in the presence of urethral retention catheters. This spasm establishes a vicious circle and requires even more morphine for pain relief. The usual result of this is a patient who is very heavily sedated. Therapeutic dosages of Demerol for the relief of pain is indicated in these individuals.

Postoperative aletectasis occurs quite commonly and usually precedes "ether pneumonia." Adequate tracheal suction with a 16F rubber catheter becomes necessary if frequent turning and coughing exercises do not prevent this. A mixture of 5% carbon dioxide and 95% oxygen may be used for the prevention of atelectasis, yet it is rarely of benefit in the treatment of this condition once airless lung is discovered. Most of these "pitfalls" of the immediate postoperative period can be anticipated and adequately treated, provided the individual who assumes the responsibility for anesthesia realizes that the operation is not over with the termination of surgery.

SUMMARY

Quite frequently, the surgeon is called upon to treat anesthesia complications during surgery. Many serious anesthesia "pitfalls" occur in connection with "minor" surgery, so a "minor" surgical procedure needs more than "minor" anesthesia. Under all circumstances, one should direct careful attention to preoperative examination and preparation of surgical patients for anesthesia, premedication, the choice of anesthetic agent and technique, and the immediate postoperative period to prevent these "pitfalls."

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Alcoholism, A Challenging Problem Of Today

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Among the numerous baffling problems with which mankind is confronted today is that known as alcoholism. Though within the past decade, research has unearthed many significant factors long hidden to science, it must be admitted still that no scientist yet fully understands the condition called alcoholism. Because of the increasing incidence of alcoholism in our own country today, this condition presents a problem not only to the medical field but also to the social, psychological, economic, political and religious fields.

It has been estimated that within the bounds of America, among those who have reached the "drinking age" are to be found 65,000,000 people. Included in that number are three million *excessive* drinkers and 750,000 *compulsive* drinkers. The members comprising this last category are also known as *pathological* or chronic drinkers, individuals who have become enslaved by the compelling powers of drink. Is it any wonder that crimes perpetrated because of criminal behavior on the part of alcoholics are daily reiterated in newspapers and over our radios? Is it any wonder that pedestrians and sane drivers are daily victimized by misguided steering wheels in the hands of unsteady, maniacal alcoholics? Is it any wonder that the innocent girlhood of America is being preyed upon daily by poorly adjusted, psychopathic, sexually-disturbed alcoholics? Is it any wonder that ten per cent of the beds in mental hospitals are being filled today by alcoholics who have so lost the semblance of their former selves that both body and mind are crying out for relief? Is it any wonder that today, when statistics show a 30 per cent increase in alcoholism over the record of the past four years, this insidious disease should be labelled a "cancer of the ego" or America's "No. 1 emotional illness?" When problem drinkers become 50 per cent greater in number than the known sufferers from tuberculosis, surely it is time for not only the medical agencies but also the concerted effort of educational, social, legal, religious, industrial and governmental agencies to attack this serious menace which victimizes two out of every one hundred adults who drink and which numbers 1,000,000 women within its category of excessive drinkers.

A recent issue of the *Kiwanis Magazine* reminded the American public that alcoholism had become not only a medical problem in which seven per cent of the adult males and one and one half per cent of the adult females were directly involved but also a mammoth sized economic problem, costing through inefficiency, wage loss and reduction of productivity, a half billion dollars annually. Is America thinking sanely when she appropriates only one million dollars a year through her government and private agencies for coping with this great problem and yet spends a half billion to pay for its ravages? Is she viewing the problem from the right perspective when she pays out $31,000,000 to maintain those same alcoholic offenders in hospitals, $22,000,000 each year for the relief of their families, and $25,000,000 a year in the wasteful expenditure of maintaining the offenders in local jails? Yet, I repeat, she spends only one million for research towards coping with the problem! Surely these figures smack of gross malfeasance. Unquestionably America needs to wake up to a fuller realization of a cancerous problem which, if its malignant spread is left unchecked, will eat out her vital organs and render her totally unhealthy. America needs to inform her populace regarding the possible plight in which all drinkers whose psychological and physiological "make-up" cannot handle alcohol will inevitably find themselves.

America needs to "shout upon the housetops" the scientifically-proved truth that *alcohol is not a stimulant*, as has been erroneously believed, but rather a *depressant* which, as it anesthetizes the higher centers of the brain, prompts the lower instincts to perform those primitive acts which the drinker would consider grossly improper or unbecoming in the ordinary walks of life. America needs to disseminate vast stores of information regarding this problem, as well as fostering concentrated research, instituting nation-wide campaigns and encouraging the establishment of Yale Plan Clinics similar to those appearing in New Haven, Hartford, Washington and elsewhere. With a new vigor, the strategy of which should be intelligently planned, America needs to attack this menacing social evil. But first of all, the nation needs to encourage straight thinking on the part of those people who still do not know that when once the "bite" of alcoholism has fastened its leach-like fangs upon a drinker of a particular constitution, he succumbs to the destructive powers of a malady far more crippling in its aspects than many of the malignant diseases of today. That alcoholism is a *deadly disease* and that the *chronic-drinker is an ill person* are facts to be no longer questioned by civilized man of the atomic age. When the alcoholic is allowed to remain in the gutter; when he is disparagingly referred to as the old "sot" or "soak"; and when he is lodged in the jail instead of the hospital, he receives derogatory treatment, perhaps because his illness is misunderstood, and the unfeeling populace from whom he needs pity and succor, heaps insults and maltreatment upon him just as an ignorant mother sometimes whips her child all the harder in an attempt to make him

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stop crying. Thus pictured, is it not readily seen that alcoholism presents a grave challenge to America today?

Etiology of Alcoholism

With 65,000,000 people in the United States out of a total population of 151,000,000 using beverage alcohol in some form, a mild degree of consolation results from the fact that among the 75 per cent of male adult users and the 65 per cent of female users, more than 90 per cent of these do not become chronic problem drinkers. What then might be said is the etiology of this deplorable condition which renders 3,000,000 males and 1,000,000 females partially or wholly unfit to function as normal individuals within the society to which they had formerly belonged?

Though there are many specific causes for drinking, it is believed by present day scientists that, with comparatively few exceptions, only persons with seriously maladjusted personalities develop into chronic alcoholics. It is true that some individuals indulge in drinking only upon special occasions and suffer no harmful effects. Many others, indulging more frequently, likewise suffer no ill; yet there are some who are unable to drink at all without suffering untoward effects. Belonging to the last-named classification are individuals who are generally anxious, immature, insecure, oversensitive and neurotic. To them alcohol represents a crutch without which they would feel unable to participate in society. Because of their feelings of inferiority, they thus seek exhilaration and emotional inhibition through alcoholic beverages.

It might then be said that some adults drink because they have learned that they can find release of tensions occasioned by business, unhealthy conditions in the home, or sexual disturbances. Others attempt to find oblivion from worry, depression and anxiety or the constant nagging of an incompatible mate. Some try to "drown their sorrows" caused by afflictions like epilepsy, rheumatism, schizoid tendencies, disappointments and failure to achieve their life ambitions. Others seek to forget self-consciousness, financial losses, boredom, sorrows attendant upon the death of loved ones or to forget the disagreeableness of moodiness or loneliness. Some drink to forget their guilt or to attain a degree of adjustment, which in ordinary life they have failed to attain. Some who are bashful and retiring seek for the ease of conversation that appears to flow from the bottle. Some drink because they are neurotic. Others drink because they seek an escape from reality. Some, because of an intense urge for excitement, seek emotional pleasure rather than rational behavior. Some, to whom unstable emotions of a nervous constitution have been handed down from an alcoholic parent, often turn to drink though they themselves were not born alcoholics. Many women drink because they erroneously believe it to be the "smart" thing to do in the so-called "gracious living" of present day society.

Psychic, Physiological and Social Aspects

Unfortunately, six per cent of those who began as social drinkers have been found incapable of controlling their appetites and have indulged in excessive drinking, only to discover with the passing of the years that they have developed an addiction to alcohol from which they are wholly unable to extricate themselves. Having previously believed that their wits were sharpened, they have awakened, alas, to find that they had become dulled instead. Having thought that so-called alcoholic stimulation would enable them to adjust with comparative ease to the requirements of the group, they have realized that they have conducted themselves on a plane altogether unbecoming to the normal patterns of behavior. Having once believed that alcohol was a food, they have awakened to realize that the malfunctioning of their organs and the development of personality disturbances are the result of the fact that alcohol, though a calory-producing food, is absolutely devoid of vitamin content. Having once been influenced by their friends to take a drink, they have come to realize that they themselves are now scorned, rebuffed and ostracized. "Who," one will ask, "are these 'six per centers' who seem apparently to prefer the alcoholic unrealities of living to their former patterns of behavior?" Yes, who are these compulsive drinkers who, even though they try to desist from drinking, are unable to do so? Scientist believe those alcoholics who will continue gradually to deteriorate are they who have encountered some conflict or life problem for which they could discover no solution. In many cases these people were sick before they developed illness of body and mind as they continued to drink excessively, having once found a way to escape from reality.

Hence alcoholism is not really a disease but the symptom of a major problem crippling 750,000 individuals in this country today, and indirectly affecting also the total population of 151,000,000 Americans. Though there exists no particular category to which one could assign the chronic alcoholics, and though it is not yet possible for one to look into the "seeds of time" and predict which individuals will grow into alcoholics, yet the consensus of scientists today is that compulsive drinkers represent maladjusted people with personality problems based possibly on such things as inferior emotional and intellectual abilities, overattachment to a parent, marked moodiness, depressions and phantastic-mystical tendencies, lack of self-control, sexual difficulties, diminished initiative, economic insecurity, tendencies toward mental illness and numerous other personality deviations which rendered the individual incapable of adjustment to life. Having once tasted the tempting elixir which temporarily rendered him immune to his disturbances and acted like a welcome, soothing balm, he continued to drink more often than did his fellows and to imbibe larger amounts than did they. Then he began to drink in secret or even to sneak around to secure his drinks,

and disliking the reproaches of his family and friends, he sought to bury his anxiety, nervousness, tremor and sweating in the bottle, being unable to endure the censure or face the conflicts. As time moved on, excessive drinking began to affect his status in the family and in the community. Likewise affected were his disposition, his morals and his health. Powerless to help himself, he became ill in body and more markedly disturbed in mind. As a chronic alcoholic he had thus become a medical, psychiatric and social problem, regarded by many as weak-willed, and an object of scorn, pity and ridicule. Thus he who once thought alcohol the crutch so essential to his easy passage through the bowlder-strewn highways, has entrusted the weight of his person to its fragile support, only at last to collapse upon it.

Syndromes Observed in Alcoholism

When excessive drinking becomes pathological, physiological disturbances in the chronic alcoholic express themselves in liver dysfunction, nutritional deficiencies, especially that of thiamine, gastritis, eructation, anorexia, pellagra, faulty metabolism, nausea, emaciation, constipation, renal changes and cardiovascular damage. By far the greatest damage seems to be done to the nervous system of the individual. This manifests itself in tremors, twitchings, speech impairment, paresthesias, pain and burning sensations, sexual impotence, irritability, numbness, stomach complaints, and so forth.

Personality Deterioration

As the course of chronic alcoholism progresses, the individual, now undersocialized, experiences a feeling of hopelessness and of personal inadequacy. There may develop impairment in emotional control and because of an increasing incapacity for inhibitory control, the individual is likely to grow unreliable, dishonest and impulsive. Poverty of ideas and inability to concentrate result. Faulty reasoning, poor judgment, evading of responsibilities, distrust and false accusations of one's mate are commonly observed. During the later stages, the individual suffers the additional discomforts of lack of money, shelter, job, clothes, accumulation of debts and frequent threats of court action. Oftentimes inebriates merge from such deteriorated personality patterns into actual dementias. The psychoses which the chronic alcoholic is likely to develop include:

(1) *Delirium Tremens.* This dreadful disturbance has an acute onset, being characterized by intense fear and anxiety, also by hallucinations, usually visual, in which the patient sees small, dark-colored crawling objects which seek to threaten him. The sleepless patient has a rapid pulse with fever, low blood pressure and kidney disturbance. This frightful malady is accompanied also by great apprehension, tremor and ataxia. Avitaminic therapy with thiamin chloride and nicotinic acid is effective. Hydrotherapy and routine spinal drainage should likewise be carefully employed.

(2) *Korsakoff's Syndrome.* Many changes in the nervous system are noticed in this psychosis. This malady is characterized by severe loss of memory, also delusions, hallucinations and confabulation. Severe muscular aches and pains, as well as neuritis in some instances, are other characteristics. A deficiency in Vitamin B_1 is suspected in this syndrome.

(3) *Alcoholic Hallucinosis.* This also is a serious disturbance in which hallucinations, not visual, but auditory in which voices, sharp, clear, warning, and threatening, are heard by the patient. There are also delusions of persecution.

(4) *Wet Brain.* This pathologic condition, sometimes following several attacks of delirium tremens is a serious condition with a poor prognosis. The syndrome is characterized by fixed facies, coma, mutterings and a purposeless picking movement of the hands.

Treatment of Alcoholism

Thus it is seen that the chronic alcoholic is not to be considered a weakwilled stumbler but rather a very ill person who was rendered, because of some reason not yet clear to science, absolutely incapable of resisting the craving for drink. Alcoholism, therefore, presents a problem of major importance and a challenge to the nation for a more humane treatment of those addicts who have fallen victim. It is readily seen then that the alcoholic must be treated not only for the purpose of removing his physical discomforts and craving for drink but also for removing the underlying personality disturbance which has prompted him to resort to excessive pathological drinking. The alcoholic, sick in thinking and behavior, is, in the words of Dr. Robert Seliger, aptly compared to a towering iceberg, the underlying part of which, though unseen, serves as a significant part from which that part seen by the world emerges.

As has been noted, the alcoholic distraught by fear, pain, mental and physical waste, is powerless to help himself. Fifteen years ago, cure of the chronic alcoholic was somewhat rare; but today, what with the advent of new psychiatric therapies and the fruits of research efforts, more cures and rehabilitations of the alcoholic are being effected.

It is necessary that therapy be directed along the lines of (1) personality analysis of each chronic alcoholic in order to determine the factor which drove the person to addiction; (2) re-education in order that the patient, after having clearer insight into the disturbing factor of his personality, will be able to direct the future course of his life according to more acceptable routines; (1) the use of medications for implanting an aversion to alcoholic beverage.

Fortunately one hears of recoveries from alcoholism resulting from religious experiences or occasionally, from reform measures on the part of the patient himself. Some resort to the highly-specialized dis-

cipline known as psychoanalysis and some treat with heavy doses of insulin (up to the shock point) and psychotherapy. Widely used today in many hospitals is the following therapy:

1. Withdraw alcohol abruptly or gradually according to appropriate types of cases.
2. Give sedative medication judiciously, paraldehyde being preferred and morphine condemned.
3. Omit restraints unless absolutely necessary.
4. Give carbohydrates in large amounts.
5. Administration of sodium chloride in attempt both to combat dehydration and to restore the normal acid-base equilibrium of the body.
6. Provide a high caloric, vitamin-rich diet. In appropriate cases, intramuscular or intravenous vitamin medication should be resorted to immediately.
7. Force fluids.
8. Do lumbar puncture for diagnostic purposes only.
9. Treat complication and precipitating factors with specific therapy such as the use of sodium dilantin for the avoidance of delirium tremens.
10. Give individual psychotherapy according to the needs of the patient.

"Sub-shock doses of insulin combined with glucose are helpful in some cases of hyperactivity and electro shock has been used effectively in the belligerent and depressive cases of acute alcoholism to render them accessible to psychotherapy. Benzedrine may also be helpful as an adjunct to psychotherapy in post toxic depressive reactions, "says L. Sharp, M.D.

In my own treatment of alcoholics in a private institution during the past two-year period, I have successfully used the method described above and occasionally have found it necessary, as Dr. Sharp suggests, to effect amenability to psychotherapy through electro-coma. During 1949 and 1950, I treated 125 males and 31 females for alcoholism, as well as 13 males suffering from alcoholic psychoses, all of whom responded successfully to this treatment. The ages of these male patients ranged from 25 years to 70 years while those for the females fell into the 25 to 60 age bracket.

To Jacobson and Hall in Denmark goes the credit for producing the new sensational drug known as Antabuse, recently placed on the American market. Though extreme caution is necessary in the administration of this potential drug, many experiments are being carried out with it. Numerous social remissions have been reported and some failures also. Doctors A. E. Bennett, Turk and McKeever report the use of Antabuse among 18 males and 9 females in a psychiatric ward of a general hospital. Sixteen recoveries resulted. Bennett and his associates at the conclusion of the treatment, stated that though the drug shows great promise, Antabuse should not yet be released for general use, further research on it being highly necessary.

The conditioned reflex treatment of alcoholism combined with psychotherapy is still producing effective recoveries. This treatment, fully developed in Russia and the U. S., employs the use of apomorphine or emetine and renders the patient teetotal for at least a year. Dent now believes that the efficacy of apomorphine is due not to the production of a conditioned reflex but rather to the specific stimulant action of apomorphine on the hind-brain, particularly the medulla.

Those advocating the Keeley cure, also the physicians of Knickerbocker Hospital, as well as those in many general and private hospitals, advocate close affiliation of the alcoholic with the splendid lay organization known as Alcoholics Anonymous, an eleven-year old social reform movement, basically religious and motivated by a desire to help other alcoholics. This organization with a present membership of 80,000, has ten branches operating in Australia at present. Each year it reaches out to assist in the rehabilitation of 20,000 new cases and reports that 50 to 75 per cent of their 90,000 alcoholics have been able to remain free of their former compulsion to drink. Dr. H. M. Tiebout reports an investigation of the "conversion phenomena" under the influences of Alcoholics Anonymous. He believes that the act of surrender in conversion initiates the switch from a negative to a positive attitude in life.

Within recent times a new endocrine treatment of alcoholism has been devised. It is believed that when blood sugar falls to a certain level, the result is a craving for alcohol which manifests itself in symptoms similar to those of hyperinsulinism. When the liver becomes infiltrated with fat, it cannot detoxify the estrogens and sex changes result. This condition can be remedied by administering the adrenal cortical hormone.

One of the most promising treatments to attract wide-spread attention recently was reported by Dr. James J. Smith of Bellevue Medical Center, New York City. Dr. Smith treated patients suffering from Korsakoff's psychosis, acute alcohol intoxication and delirium tremens by administering A C T H and A C E (adrenocartical extract). When treating delirium tremens with A C T H, improvement ordinarily noted in the past as beginning within 48 to 72 hours, began to show itself within 3 to 10 hours. In each of the other types of psychoses these preparations were also effective. One of the significant findings of this new therapy is that delirium tremens is an expression of adrenal exhaustion.

It is the candid opinion of the writer who, for a period of twenty years, has worked with all types of alcoholics, that when so called "social drinkers" begin to realize alcohol is taking a firmer grip upon them, there is every belief that through cooperative effort with the psychiatrist, they have a splendid chance to throw off the drink habit. Also it is the opinion of the writer that for the drinkers who are just beginning to

merge into the addiction stage, there is likewise a chance for recovery. For those who, on the other hand, have so chronically enslaved their physical and mental powers to alcoholic beverages that deterioration and gross disturbances of the personality have resulted, there is small hope for a permanent recovery. Various therapies known to present day scientists will avail temporarily, but only so long as the deteriorated faculties of the mind of addicts can discipline themselves to refrain from even one taste of alcoholic drinks. Thus, for the psychopathic type of drinker and the chronic alcoholic, the writer would warn that alcohol proves as truly poisonous and malignant as a cancer. The wise use of psychotherapy, both individual and group, is employed by the therapist who seeks to impress upon the addicts the importance of never reverting to alcohol or any other alcoholic beverages after treatment.

Rehabilitation of Alcoholics

With a problem so baffling and of such mammoth proportions as to render 4,000,000 Americans out of control, the time is ripe for more effective measures at rehabilitating the alcoholic. It is urgent that the great American public become better informed regarding this cancerous malady afflicting not only the drunken psychotics, the drunken morons, the drunken non-psychotic personalities, the social misfit drinkers and the problem drinkers, but also affecting the health and safety of the whole country itself. How many Americans today know that 12,000 people a year are killed by alcohol? That 8,000 are killed in automobile wrecks resulting from alcohol? That Americans since Repeal have spent $88,000,000,000 on alcohol? That during the past year, Americans spent $8,500,000,000 for the legal sale of liquor? That many cases of suicide unquestionably have their source in alcoholism? That 20 per cent of all felonies can be laid at the door of alcohol? That when an individual becomes enslaved by the drink habit, he is unmistakably an ill person and in dire need of help rather than excoriation?

Fortunately, within the past decade more scientific research has been carried out in the field of alcohol studies, and more concentrated efforts at rehabilitation of chronic alcoholics have been made than ever before. But with this praiseworthy movement only in its infancy, there is presented a mighty challenge to administrators engaged in the great cause of rehabilitation. Especially noteworthy are the programs operating in the Yale Plan Clinic, the Connecticut Pittsburg, Portland (Oregon), Washington, D. C., and so on.

As a result of pertinent observations of the past few years, administrators of these clinics named above have become convinced of the following valuable findings:

1. The task of rehabilitating the alcoholic is one requiring the cooperative efforts of participants from the fields of medicine, education, economics, politics, religion, social welfare, the law, the radio and the press.
2. For carrying out a rehabilitation program, there must be an out-patient office or center, preferably with its own hospital and convalescent facilities or at least integrated with a hospital.
3. The public must realize that, though any illness or trauma such as typhoid, thrombosis or combat injury has its psychic concomitants, few can compare with alcoholism in its complexity of origins, duration, scope of effects on either the patient himself or on his relative.
4. No real cure for alcoholism has yet been found though recovery can be, and often is, attained.
5. Diagnosis at such a clinic includes not only an investigation into the physical and psychological conditions of the patient but also into his social conditions, as well as the drinking history of the patient.
6. Though the excessive drinking of alcoholic beverages and the attendant behavior are factors leading to the recognition of the sickness of alcoholism, it should be remembered that in its etiology, alcoholism is primarily psychosocial. Though somatic predisposition manifests itself, the dominant aspect of alcoholism will remain psychosocial. This aspect will not necessarily become altered through agencies like the city mission, the fail and the hospital, which serve merely as "drying out" functions. Though efforts at rehabilitation may start in such places, it must continue, following the patient's release and must be oriented to the ordinary life situation of the patient. Sometimes, however, specific changes in the environment may become necessary. Social and psychological reorientation of the patient's family may also become necessary.
7. The team in any rehabilitation center should include psychiatrist, physician, psychiatric social worker, psychologist, secretary-receptionist and typist.
8. The public must be apprised of the fact that the old approach of dealing with alcoholics through punishment is taboo, and the new approach through humanitarian treatment of the ill patient is proving dramatically successful.
9. The program of rehabilitation includes not only the therapeutic aspect but also the preventive aspect. It is also concerned with altering erroneous present day attitudes, or removing the stigma from alcoholism and of informing the populace regarding the true nature of alcohol as well as the true meaning of alcoholism. Dissemination of such information should be effected through the lecture platform, classrooms, reputable publications, civic organiza-

tions, the press, radio, professional conferences and other outlets. Now that television is being brought into the homes of the nation, including those homes where temperance is sought after, how vital it is that this remarkable device be used effectively and constructively rather than as a destructive, dramatic means for endorsing traffic in alcoholic beverages.

10. As stated by the Connecticut Commission on Alcoholism, the true goal in rehabilitation is "the return of the individual—more acceptable to himself, increasingly independent and not using alcohol—to the community in which he should be an acceptable member."

With the complexity of the problem of alcoholism so evident at the present time, it is indeed superfluous to state that, unless improved legislative measures are taken soon, this country will find its dilemma even more precarious. Of particular interest to the writer is the 1945 Connecticut law providing for the study, care and treatment of inebriates. Because this piece of legislation is worthy of emulation, I should like briefly to quote a description of its all-inclusive contents as explained by Dr. Selden D. Bacon in the *Quarterly Journal of Studies of Alcohol*, (September, 1945 issue):

It recognizes that alcoholics are sick people.

It recognizes the fact that alcoholics can be rehabilitated.

It recognizes a responsibility on the part of the government to meet this problem.

It calls for study of the problem.

It calls for public education on the subject of alcoholism.

It omits all mention of punishment as a means of controlling the problem.

It recognizes the necessity of diagnosis, the possibility of various forms of treatment and the advisability of probationary rather than institutional treatment whenever possible.

It offers free service to those requesting it.

It recognizes that many groups, individuals and official bodies have interests which are affected by the problem of alcoholism and that they have skills which may be required if rehabilitation and eventual prevention are to be realized.

It has accepted the principle of separate administration.

It has located responsibility in a new state board and has given to that board sufficient discretion and power.

CANCER

Edited by HENRY W. MAYO, JR., M.D., Charleston, S. C.

THE RADIOLOGICAL DIAGNOSIS OF INTRACRANIAL TUMORS

HAROLD S. PETTIT, M. D.

The following is a review of the potentialities, limitations and some of the pitfalls of x-ray examinations in intracranial tumors. X-ray examination of the skull is one of the primary procedures in the diagnosis of cranial and intracranial tumors, but a negative report on plain skull films is of no value in excluding the possibility of intracranial tumors. Fewer than half will produce demonstrable bone changes. A routine examination consists of a PA film, an AP occipital projection, and lateral stereo films. Special projections of the petrous ridges are obtained if there are signs suggestive of an acoustic neuroma or tumor of the cerebello-pontine angle. Projections vertically through the skull are not routinely obtained but are frequently found helpful when there are significant changes in the petrous ridges or the floor of the anterior or middle fossa. Below we have listed the findings that may be present to indicate a tumor. Not all of these indicate a tumor when they are seen. For instance an osteomyelitis or Hand-Schuller-Christian syndrome will produce bone destruction, but these lesions are relatively easily identifiable and will not be included in the discussion.

I. Bone Changes.
   - A. Those due to generalized increased intracranial pressure.
     1. Widening of the sutures.
     2. Increased convolutional markings.
   - B. Atrophy or erosion.
   - C. Bone production.

II. Calcifications of the cranial contents.
   - A. In tumor — meningiomas, astrocytomas, oligondendrogliomas, craniopharyngiomas.
   - B. Benign calcifications.
   - C. Physiological calcifications.

III. Contrast Studies — pneumography and angiography.

INCREASED INTRACRANIAL PRESSURE

Widening of the suture lines in children is definite evidence of increased intracranial pressure, and is not an infrequent finding in the cerebellar tumors of children that have partially blocked the fourth ventricle (Figure 1). However, this finding is of no help in localizing an intracranial lesion. After the sutures have closed generalized increased pressure may accentuate markedly the convolutional markings of the skull. These vary considerably normally and caution must be used in assigning them pathological significance.

FIGURE 1

AP occipital film of the skull demonstrating separation of the sagittal and lambdoid sutures in an 11 year old white female with a solid tumor of the left cerebellar hemisphere, extending into the vermis. The separation is due to an increased intracranial pressure secondary to a block of the fourth ventricle.

These increased convolutional markings are much more striking in infants with premature closure of the cranial sutures.

Atrophy and erosion of bone is most often found in the sphenoid bone in the neighborhood of the sella turcica. The clinoid processes and the dorsum sellae are particularly susceptible to pituitary adenomas, craniopharyngiomas and dilatation of the third ventricle. Of the three pituitary adenomas, the basophilic is the least likely to alter the sella and we do not expect to find pressure changes. There may be marked decalcification but this is part of the generalized osteoporosis of the disease. The acidophilic and chromophobic tumors as a rule cause destruction of the floor or dorsum of the sella and less often erosion of the tuberculum. An early change is thinning of the dorsum sellae. Unfortunately, any prolonged increased intracranial pressure may do this. Concomitant depression of the floor of the sella is helpful in establishing the intrasellar origin of the lesion but occasionally the pulsating pressure of a blocked third ventricle will be transmitted through the infundibulum to the pituitary, and the findings may be identical with those of a pituitary adenoma. Craniopharyngiomas are prone to simulate intrasellar tumors by their erosion

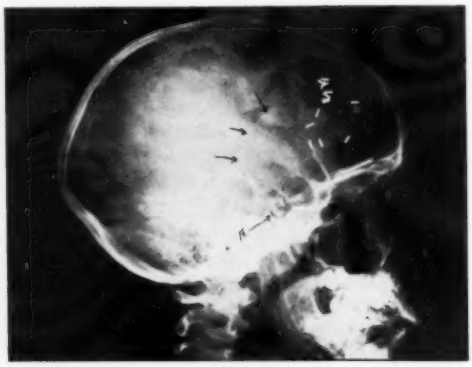


FIGURE 2

8 year old colored male with large craniopharyngioma. Arrow "A" points to the only visible calcification on the first skull films. The other three arrows point to the calcification of the cyst wall that became visible 6 months after the operation at which an anastomosis between the cyst and the right lateral ventricle was established. There has been no recurrence of symptoms since the operation.

of the clinoid processes, but, in addition to this, 65 per cent will have recognizable flecks or curvilinear deposits of calcium in their walls (Figure 2). These tumors almost invariably are discovered before 20 and pituitary tumors later in life. The sella should be measured, and for accurate measurement the films must be made in the direct lateral projection with a distance of at least 36 inches from the tube to the film to minimize magnification. There are frequently cases in which the sella is borderline in size, and without bone erosion we must be careful in evaluation of such films. Decalcification of the sella without erosion is also a finding to be used with caution. The dorsum sellae participates in the decalcification of senile osteoporosis and in various forms of osteomalacia. The decalcification may be more pronounced in the dorsum sellae than in the other bones of the skull and lead to the erroneous impression of increased pressure on the dorsum.

Localized erosion of bone is not so often seen in the other areas of the skull but is quite helpful when found. Lesions of the cerebello-pontine angle, particularly acoustic neuromas, have a tendency to erode the petrous ridge on the same side. Mere asymmetry of the petrous ridges is not enough. This is too often present in normal individuals. To be sure of pathological significance we must see eroded bone.

Any slow growing tumor may produce localized erosion or atrophy in adjacent bone. Meningiomas are renowned for producing new bone by invasion of bone and elevation of the periosteum. The new bone may be dense or it may be laid down in spicules, resembling the changes of Cooley's anemia and

sicklemia, but they are localized. Actually this is not nearly so common as decalcification and erosion of the involved bone. Localized thinning of a bone of the cranial vault need not be due to intracranial tumor. In one of our recent cases there was localized thinning of one of the parietal bones. There was no evidence of old injury to the bone and we had no such history. We assumed the thinning to be due to an underlying tumor, but at operation an old hematoma was found at this point. On another occasion a young man had clinical signs of cerebellar tumor. Plain films showed a well defined, limited area of thinning in the occipital bone. The appearance was typical of cholesteatoma (more properly called epidermoid) of the skull. At operation no underlying tumor could be found and sections of the abnormal bone showed no microscopic pathology. Our assumption is that we were dealing with an old area of fibrous dysplasia.

There are two lesions of the skull referred to as cholesteatomas, and both produce bone erosion. They are often confused. The above mentioned type is due to an embryonic inclusion of epidermoid cells in the skull itself, in the dura or brain. It is a benign tumor but slowly expansile. When it arises between the diploe it erodes both tables, but generally unevenly. In the dura or brain it produces a pressure erosion of adjacent bone. These lesions may be removed surgically, but the entire wall must be removed or the tumor will recur. The possibility of extension into the brain makes a careful search for such extension necessary. The second type occurs in the mastoid antrum or attic following mastoiditis, and is due to extension of epithelial cells from the ear into the mastoid. It forms a cystic lesion which often slowly increases in size.

Dermoids of the brain are rare but sometimes occur and form smooth edged defects of the skull.

While not true intracranial tumors, the nasopharyngeal transitional cell carcinomas must be considered when eroded bone is encountered in the floor of the middle fossa. These tumors arise in the nasopharynx and generally metastasize to the cervical nodes before the primary lesion is suspected. There was recently referred a case for therapy that had eroded through the sphenoid and produced symptoms of an intracranial tumor. Although its true nature had been suspected, no tumor was found on examination of the naso-pharynx and diagnosis was not established until biopsy of the intracranial extension was performed. These tumors are radio-sensitive, but in this instance we were able to provide only minor temporary palliation.

BONE PROLIFERATION

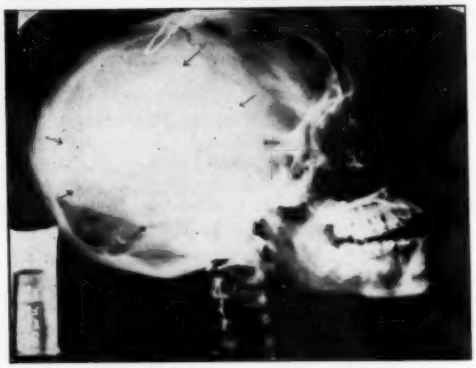
While, as previously mentioned, meningiomas may cause bone proliferation, localized thickening of the cranium is most often due to osteomas or a benign hyperostosis referred to as metabolic craniopathy. Osteomas, although benign, are sometimes extensive. It is not uncommon to see them involving the frontal bone and all of the sinuses on one side, grotesquely disfiguring the skull and face. These lesions do not involve the inner table of the skull, although many projections of the skull may be necessary to show that this table is intact. Metabolic craniopathy, on the other hand, involves only the diploe or the inner table of the skull. It is generally found in females and associated with obesity, headaches and some mental deterioration. The common location is on either side of the midline of the frontal bone where it is called hyperostosis frontalis interna. We have not infrequently found this lesion in young and middle-aged individuals, but then it has been associated with well defined glandular dysfunction. Our most recent young person with this finding was a 30 year old achondroplastic dwarf. An exception was a 50 year old white female with headaches and left sided weakness. Her skull films showed multiple areas of internal hyperostosis. The largest lay over the central gyrus on the right and projected into the cranial cavity for 1.5 centimeters. This was removed and found to be compressing the rolandic vein. Since operation there has been complete relief of symptoms. The importance of metabolic craniopathy is hard to gauge. Too often we see it in skull films obtained for fracture and there are no symptoms referable to it. Only in rare instances, such as the above mentioned case, is surgical correction justified.

CALCIFICATION IN TUMOR

Calcification in a neoplasm is the most important roentgen finding, but it is present in only 10 to 15 per cent of the cases. It localizes the lesion and, in addition, the distribution of the calcium may indicate the type. Of the gliomas, oligodendrogliomas calcify most frequently but they are not so common as astrocytomas which also have a tendency to calcify (Figure 3 and 4). Both of these tumors are slow growing and apt to be quite large when discovered. Calcification is scattered over a large area and arranged in irregular linear deposits associated with granules and nodules of calcium. Of some aid in differentiation, the astrocytoma is generally present in the cerebellum in childhood and in the cerebrum in young adults. The oligodendroglioma is a tumor of 40 or over. It rarely undergoes cystic degeneration, a common occurrence in astrocytomas. If curvilinear strands of calcium are present, they indicate cyst formation.

Ependymomas are found in the ventricular system of children and approximately one-fourth to one-half contain calcium. The calcium is in multiple small granular masses, resembling closely that seen in meningiomas, but the latter are almost never encountered in adolescents and are always on the brain surface. A not uncommon location of meningiomas is between the cerebral hemispheres, and here there is true calcification of the tumor, and not stimulation of bone formation by the periosteum.

Pinealomas are often diagnosed by an unusually



FIGURES 3A AND 3B

These figures show massive calcification in an astrocytoma which involves all of the right parietal lobe. There is bulging of the right parietal bone and irregular thinning of the bone due to pressure and enlargement of the sella turcica.

large calcification of the pineal. The borderline between the physiological calcification of the pineal and calcification of neoplastic size is sometimes troublesome to define.

Glioblastoma multiforme is a rapidly infiltrating tumor of the cerebral hemispheres seen almost exclusively in adults. Medulloblastomas occur in the cerebella of children. Both of these tumors are rapidly progressive and neither is likely to contain calcium.

The calcifications of the craniopharyngiomas have been mentioned previously.

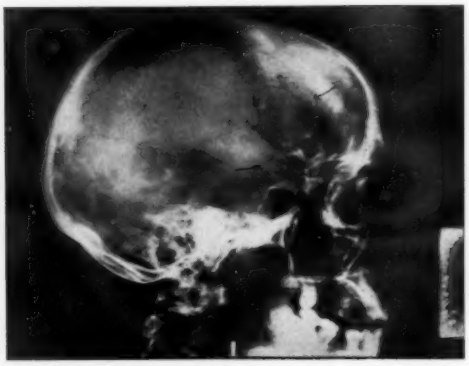


FIGURE 4

43 year old white male with irregular streaky areas of calcification of the left frontal lobe. The tumor measured 8 x 10 cm. in diameters and microscopically was a mixed astrocytoma and spongioblastoma. Other films showed decalcification of the right frontal bone, the lesser wing of the sphenoid and the anterior right clinoid process.

BENIGN CALCIFICATIONS

Calcification in the cerebral cortex is commonly present in association with capillary angiomas but is not often seen with arterio-venous aneurysms. The calcium is in the cortex, not in the walls of the angiomatous vessels, and is secondary to atrophy. It is superficial in location, wavy and tortuous, following the convolutions of the brain. When there are also facial angiomas, the syndrome is referred to as Sturge-Weber, and when with retinal angiomas and possibly angiomas of the abdominal viscera as the von Hippel-Lindau syndrome. The value in finding these associated angiomas is in confirming an otherwise tentative diagnosis of cortical angioma.

Another rare syndrome is Pringle's disease. It consists of tuberose sclerosis of the brain with fine granular and cortical and possibly heavier subcortical nodules of calcium, associated with adenoma sebaceum. Six months ago we saw skull films of a young white female that showed a very fine cortical or dural calcification distributed over a wide area. The presence of adenoma sebaceum and the history of convulsive seizures with mental deterioration gave us a presumptive diagnosis of Pringle's disease. Calcifications are infrequently seen in brain abscesses, but are not at all uncommon in tuberculomas. The calcium may be present in large flocculent masses in the latter, and several such areas may be visible. If several widely scattered areas of calcification are present it is most likely that they are not due to tumor. The calcifications of toxoplasmosis are smaller than tuberculomas, but they are indistinguishable from them. Hypoparathyroidism occasionally produces calcification in the basal ganglia. Fortunately these are symmetrical. They

increase with prolongation of the disease. The larger cerebral vessels may be calcified in hyperparathyroidism, but are easily recognizable.

PHYSIOLOGICAL CALCIFICATIONS

Physiological calcifications are valuable in indicating the presence of intracranial tumors and should not be abused by being erroneously diagnosed as calcified neoplasms. The most common mistakes are failure to recognize calcifications of the choroid plexuses and the petro-clinoid ligaments as such. While the vascular choroid plexuses extend throughout the ventricles, the most likely point of calcium deposition is the glomus of the plexus of the lateral ventricle at the junction of the posterior and inferior horns with the body. This lies 2.5 centimeters from the midline and is superimposed, or nearly so, on the pineal in the lateral films. While in the average normal skull with demonstrable calcium in the choroid plexuses these areas will be symmetrical, they need not be so, and asymmetry cannot be used as evidence of the presence of a tumor when there are no supporting findings.

The position of the pineal is valuable and must be noted in all films in which it is visible. In PA and AP films it should not be more than 4 millimeters from the midline, even in films that are poorly centered with slight rotation of the skull. If the pineal is out of position, it may be due to displacement of the opposite side by a space filling lesion, or to the side of the lesion in cases of brain atrophy or necrosis. Several methods have been devised to determine abnormal position of the pineal in the lateral films. Vastine and Kinney charts, or Fray markers are necessary for this, and a shift in this plane is evaluated in the same way as the deviation from the midline.

CONTRAST STUDIES

When the plain films are inconclusive, it is the duty of the neurologist or neurosurgeon to determine the advisability of air studies or cerebral angiograms.

Properly done air studies are not dangerous but do cause considerable discomfort. Ventriculography must be done when there is increased intracranial pressure. If air is injected in the lumbar area when there is increased intracranial pressure fatal herniation of the brain into the foramen magnum may occur. When safe we prefer encephalograms as generally they outline the subarachnoid spaces, and cortical lesions may be demonstrated. When there is any doubt as to the location of the tumor, pre-operative air studies should be done. Space does not permit discussion of the various findings in air studies, but the presence of a tumor can be demonstrated in 50 per cent of those cases in which the skull films were negative (Figure 5).

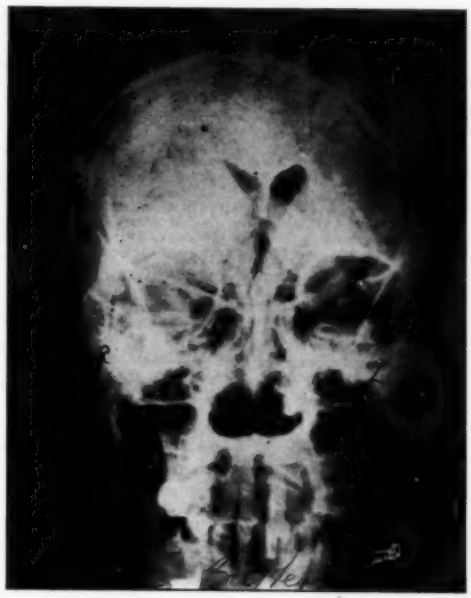


FIGURE 5

44 year old colored male whose plain skull films were negative. The encephalograms show a shift of the lateral ventricles to the left, no subarachnoid markings on the right over the frontal and parietal lobes, and no visualization of a right temporal horn, indicating a tumor in the inferior portion of the right frontal lobe.

Another special procedure that has been slowly gaining approval during the past ten years is angiography. A radio-opaque material, preferably 35 per cent diodrast, is injected rapidly into the internal carotid artery on the suspected side, or into the common carotid artery with the needle pointed to the internal carotid artery. Serial films are exposed in quick succession to record the arteries, capillaries and veins as they are filled with diodrast. If higher concentrations of diodrast or neo-iopax are used fatal brain edema may occur. This method is generally reserved for those cases in which plain films and pneumography fail to demonstrate the lesion. It is of utmost value in arterio-venous fistula and in other vascular lesions, but must be used with caution following hemorrhage or embolism. Arteriovenous aneurysms are well visualized by this method as these vessels offer the course of least resistance to the flow of the blood and the opaque medium. Some tumors have characteristic vascular patterns while others manifest themselves by displacement of the vessels.

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Original manuscripts, subject to approval by the Editor and the Editorial Board, are desired for publication in the Journal. They should be typewritten, double spaced, on 8½ x 11 paper. References should be complete, and only such as relate directly to statements quoted in the paper. Illustrations will be used as funds permit, or as authors are willing to bear the necessary increase in cost. Short original articles are preferred to long reviews.

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GOING FORWARD

The need for aggressive and progressive leadership in the medical profession is a continuing one, and we are confident that such leadership will be ours in the coming year.

Dr. J. D. Guess of Greenville will soon be assuming the presidency of our Association and working with him will be the officers and Council. The opportunity for service in our own state and for participation in national affairs is unparalleled and we believe that Dr. Guess and his colleagues will not be found wanting in their efforts to meet this challenge.

Dr. John Cline of San Francisco will soon be installed as president of the American Medical Association. Dr. Cline visited South Carolina a few weeks ago and in his public addresses at Florence, Columbia, and Greenville, and in his private conversation with many physicians left the impression of being one who could well stand at the helm of our national organization.

But leadership itself, fine though it may be, is of little avail unless those of us in the ranks give wholehearted support. Our Association has a blueprint for the future, our own Ten Point Program, and it is around the objectives of this program that we must rally our efforts. Cooperation with others, making medical care better and available to all, working out some satisfactory plan for the care of the indigent, encouraging the wide-spread use of pre-paid hospital and sickness insurance, educating the public in affairs medical, preventing the political control of medicine—these are the goals of our Association. But they must also become the goal of each and every member of the Association. Then and only then will we have achieved the purposes for which our organization was perfected over a century ago.

PREMATURITY

Although we have cause to be thankful and proud that the infant mortality rate in South Carolina has dropped precipately during the past decade, there is one field of infant care in which there is still much to be done. We refer to the premature baby.

According to a study recently made by the Division of Maternal and Child Health of the State Board of Health, there were 2,304 infants who died in S. C. last year before reaching the age of one year. Of this number 706 or 28.6% had the cause of death listed as prematurity. And of these 706, 354 died within the first twenty four hours of life and 232 more failed to live to the age of one week.

One would be a fool to say that all of these babies could have been saved with the best of medical care, but one would be within the realms of reason to say that a goodly number could have survived if they had had adequate medical attention.

If our profession is to make its contribution toward the lowering of premature deaths, two things must be done. First, all of our hospitals must be prepared to provide the care which premature babies need—good incubators, isolation from infection, and nurses who are especially trained in the care of these little babies. Second, all physicians who are likely to deal with these infants, pediatricians and general practitioners alike, must acquaint themselves with the newer knowledge in premature care. Hospitals and physicians must both realize that the day has long since passed when any type of incubator and a medicine dropper of milk are all that are needed for the adequate care of a premature baby.

Let it be said that some of our hospitals are providing the essentials and that many physicians are employing the newest methods of care. But there are still hospitals and physicians whose facilities and work leave much to be desired.

The Division of Maternal and Child Health has taken full cognizance of the situation and has not only secured incubators in various counties which are available to physicians but has also trained many of the public health nurses in the care of these little babies. Physicians should not hesitate to call for help from the Board of Health when the need arises.

The problem of the premature baby constitutes one

of our greatest challenges, but the combined efforts of the physician, the hospital and the public health department can do much to meet this challenge.

APPRECIATION

As retiring President of the Woman's Auxiliary to the South Carolina Medical Association, I extend to the South Carolina Medical Association the appreciation of our officers and members for your splendid cooperation, your inspiring interest, and your generous financial support. It has been a privilege to work with your President, Dr. W. R. Tuten, and to feel that we have his confidence and respect. We realize that any worthwhile achievements that our Auxiliary may have made have their tap roots in the ideals of your organization and have been fostered and nurtured by your cooperation and interest.

To our Advisory Council: Dr. T. A. Pitts, Dr. W. W. King, Dr. F. E. Kredel, Dr. R. L. Crawford, Dr. G. H. Bunch and Mr. M. L. Meadors, go our thanks for their able assistance in evaluating our program and in strengthening the fiber of our organization. We acknowledge with gratitude the valuable counsel of Dr. T. A. Pitts, Chairman, who has been most helpful in the advance planning by the Executive Board of the Woman's Auxiliary.

We are especially grateful to those who have afforded us channels of communication: to Mr. M. L. Meadors for his excellent work on the quarterly Auxiliary Bulletin, our official organ of auxiliary contact; and to Dr. Julian P. Price for the valuable space allotted us in the Journal of the South Carolina Medical Association. We are also indebted to Dr. N. B. Heyward, Secretary to the South Carolina Medical Association, for his sound advice and requested information. I would also like to take this opportunity to thank Dr. O. B. Mayer, Chairman of Council of the South Carolina Medical Association, for permiting representation from our State Auxiliary to appear annually at your meeting of Council.

Allow me to congratulate you on the choice of Dr. J. Decherd Guess as your incoming president. From past experience we know that the Woman's Auxiliary will find in him an interested co-worker.

Mrs. Alfred F. Burnside, Pres.
Woman's Auxiliary to the S. C.
Medical Association.

CONFERENCE ON RURAL HEALTH OF THE A. M. A.

The Sixth Annual Conference on Rural Health of the American Medical Association was held in the Peabody Hotel, Memphis, Tennessee, February 23-24, 1951. It was preceded by a meeting of the National and State Committees on Rural Health of the A. M. A. on February 22nd. It was my privilege to attend the sessions of both meetings and to participate in the discussion. This was in connection with the Committee Meetings.

To report adequately on these meetings, I should like to include the entire text of most of the addresses and stenographic transcripts of the discussions; since this would necessarily require many pages of transcript, I shall confine myself to mentioning what I considered the most important and interesting features of the program.

"Sparkpluging Rural Health" was the theme of the National and State Committees' morning session February 22nd, and the principal speakers were Dr. F. S. Crochett, Chairman of the Committee on Rural Health of the A. M. A., and Aubrey D. Yates, Field Director, Committee on Rural Health, A. M. A. Their remarks were followed with the greatest interest.

Reassembling after luncheon, Dr. E. K. Yantes, of Wilmington, Ohio, reported on the "Medical Aspects of the Clinton County, Ohio, Survey."

"Problems of Providing Hospital Accommodations in Rural Areas" was next on the program, the speakers being Doctors W. A. Wuse, Ontario, Oregon; W. A. Weight of Williston, North Dakota; and Allen T. Stewart, Lubbock, Texas. In the discussions, afterward, I offered a few remarks—based on my 55 years of medical practice in a small town, rural area, which will be presented in a separate report.

The general sessions on the morning of February 23, got off to a flying start, with talks by Dr. Crochett, the dynamo of this and all other of the conferences, and Mr. Yates. Mrs. Shelby Carr of Richmond, Kentucky, described how her County Council had been organized, and Dr. Yates told what the Clinton County, Ohio, County Council had done and was doing. H. E. Slusher, Chairman of the Health Committee, American Farm Bureau Federation, Jeffersonville, Missouri, dwelt upon the work of the State Health Council.

In the afternoon gathering Paul A. Miller, Extension Specialist of the Michigan State College at East Lansing, presented a progress report on a National Study of Community Health Action—sponsored by the Farm Foundation of Chicago, and conducted by the Social Research Service of Michigan State College.

Aspects of rural health from a variety of angles found the local physician, the county agent, county farm bureau president, the state grange representative, the home demonstration agent, the local health nurse, the milk producers, and the parent-teachers association, each contributing their views. This was a most interesting and illuminating feature.

At the evening session, we heard two notable addresses—Dr. Haven Emerson, member of the Board of Health of the City of New York, and Professor Emeritus of Public Health at Columbia University, who used as his subject, "Public Health and Medical Care for the Community and the Individual." "Let's Try The American Way" was the theme of the speech

delivered by Mrs. Charles W. Sewell, Administrative Director of the American Farm Bureau Federation, Chicago.

Both of these addresses well repaid our close attention and I regret that the entire text of both cannot be included in this report. I am sure copies can be obtained through the office of the A. M. A. in Chicago, and of all of the talks, and I strongly advise that any physician concerned with rural practice, read them carefully.

The morning session of February 24, had for its theme "Following Through Back Home." Statements were made by leaders of represented groups on what this conference meant to them, and what can be accomplished at the community level. The speakers included Herschel Newson, Master of the National Grange, Washington, D. C.; L. J. Hetch, President, Tennessee Farm Bureau Federation, Columbia, Tennessee; H. C. Sanders, Director of Extension Service, University of Louisiana, Baton Rouge; Dr. Allen T. Stewart, Regional Director, Committee on Rural Health, Lubbock, Texas; Dr. Felix Underwood, Mississippi State Board of Health, Jackson; Eugene Butler, Editor, Progressive Farmer, Dallas, Texas; Mrs. Arthur A. Herold, President, Women's Auxiliary to the American Medical Association, Shreveport, Louisiana; and Dr. Thomas C. Shaffer, Department of Pediatrics, Ohio State University, Columbus.

In the closing session that afternoon, we had the following speakers: Dr. Dean S. Luce, Canton, Massachusetts, voted the General Practitioner of the year; Dr. Elmer T. Henderson of Louisville, Kentucky, President of the American Medical Association; and a particularly stimulating address by Ed Lipscomb, Director of Public Relations, National Cotton Council, Memphis, Tennessee. Mr. Lipscomb is a nationally known figure in the field of public relations and his views on bringing about a better understanding of health problems of laymen, proved to be highly worth while—very witty and entertaining.

In concluding this report, I should like to make a comment on our meeting place—The Peabody Hotel in Memphis. It is one of the leading hotels of the land, and ranks with the best in such metropolitan centers as New York and Chicago. Everything possible was done to make our stay pleasant. Memphis is a wonderful city on the banks of the great Mississippi River. The college is also located there and my friend, Dr. Preacher, who accompanied me there, naturally, as a medical student, knew all about it—where to go to see the various points of interest, etc., as you can well imagine!

Those in charge of the program deserve praise for the way in which the sessions were conducted. Although the conference involved many speakers and close timing, the whole affair moved smoothly along at all times. I am very glad I was able to attend, and wish to express my thanks for the honor conferred.

Finally, I wish to congratulate Dr. Ben Wyman, his associates, the state laboratory, and our County Health Departments for the splendid work they are doing toward the improvement of the health of our people — especially in the prevention of contagious and infectious diseases.

A. W. Browning, M. D.
Elloree, S. C.

THE TEN POINT PROGRAM

M. L. MEADORS, DIRECTOR OF PUBLIC RELATIONS AND COUNSEL

COMPULSORY HEALTH INSURANCE OR SOCIALIZED MEDICINE

Albert J. Robinson, M. D.*

The cost of medical care is a problem in which the American people, American medicine and voluntary insurance plans have a vital interest. Numerous bills have been prepared by our Administration in Washington, hoping that the House and Senate will act favorably on some form of national compulsory health insurance or socialized medicine. I certainly do not pretend to know them all. I doubt if even our own senators know the details of all of them. However, the bill being sponsored by President Truman and Federal Security Administrator, Oscar Ewing, will comtemplate a payroll tax of 1.5 per cent on all earnings up to the first $4,800. This tax deduction would be matched by a like contribution from employers to finance hospital and medical care. In addition, the bill calls for another 0.5 per cent of salary from each source to finance dental and nursing care.

A National Health Insurance Board would be set up to run the program. The Board would allocate the money collected through payroll taxes to state agencies. Doctors, nurses, dentists, and hospitals would enter into agreements with the state agencies for payment by various methods. There would be no payment directly by the public to doctors or hospitals.

The Truman-Ewing program is being expertly propagandized by the Security Administrator, and the taxpayers are paying the cost of the selling campaign. Arrayed against the proposal are the American Medical Association and a variety of allies, in-

*Connecticut State Medical Journal, March, 1951. The author is Vice-President of Connecticut General Life Insurance Company.

cluding the major veterans' organizations, the American Farm Bureau Association, public health officers, the National Grange, the American Bar Association and a variety of other groups, including voluntary insurance plans. In the New York Times on Sunday, April 2, Mr. Ewing, in a speech before the National Association of Retail Druggists, pointed out that compulsory health insurance would mean "more dollars in your cash register." Notwithstanding this, the National Association of Retail Druggists are opposed to compulsory health insurance. These groups believe that the best answer to the cost of medical care in the United States is through voluntary provision for the costs of illness.

Outside the Government, the principal supporters of socialized medicine and compulsory health measures are the leaders of certain labor organizations. So far there is no indication that the rank and file of these organizations are sufficiently informed on the implications of the plan to entertain more than a vague notion that if medical and hospital care could be obtained "for free" it sounds good.

Let us examine why this proposal has come before the Congress and the people. Why is it being proposed by the President and Mr. Ewing? First, there is the element of humanitarianism in the picture. Then there is the element of politics. The Administration understandably hopes it will have a popular issue here and that their stand will gather votes for them in the future. And then there is the element of power. We have watched the growth of bureaucratic empires in the Government and we know something about their cost and efficiency. If this plan should go through, Mr. Ewing and his successors will hold prime power over one of the most vital aspects of American life.

Let's take a look at the arguments Mr. Ewing or one of his advisers might place before a Senate committee conducting hearing on this issue.

1. DRAFT FIGURES—He might start out by stating that the health of this nation, rich as it is, in a deplorable state. As eloquent testimony, he would point to the draft rejection figures of over 33 per cent.

2. AMERICAN MEDICAL ASSOCIATION STATISTICS—He might say that the American Medical Association statistics on the number of people currently covered under voluntary plans against hospitalization, surgical costs, accident and sickness, and medical expenses are inflated, and that its hopes for the future of voluntary plans are far too optimistic.

3. CAN'T AFFORD IT—He might tell the committee that most people can't afford such protection, and that even of those who can, many may not be given an opportunity to avail themselves of it. He would argue that none of these plans offer complete coverage, and practically no protection in chronic illness where benefits are quickly exhausted.

4. CHARITY CARE—This train of thought might lead our advocate to the subject of charity care. To him this is repugnant, because, when charity care is obtained it is not good enough even for the indigent in either the material or psychic sense.

5. COMPULSORY HEALTH INSURANCE AND SOCIALIZED MEDICINE—It would be argued that compulsory health insurance cannot be called socialized medicine. The Government would merely collect money and see that it is properly dispensed. There would be no Governmental interference with the patient's free choice of doctor, no dictation to the medical profession as to where or how it should practice medicine, no heavy hand of bureaucracy on the initiative which stimulates research. The relationship between doctor and patient, often delicate and sometimes vital, would be preserved. Government would simply control the purse.

6. SOCIALIZED MEDICINE IN OTHER COUNTRIES—Although our spokesman says he is not proposing socialized medicine, he would point to other countries, including Britain and Germany, which have adopted socialized schemes. He would say that the system seems to be working all right in these countries, and if so many nations have turned to socialized medicine why should we think we're exempt from a march along the same road? To be sure, doctors, nurses and hospitals are overtaxed in these places by the rush to take advantage of their services. If overtaxed, so the argument runs, it is Government's business to see that more facilities, both human and material, are provided.

7. COST—"As for cost, gentlemen of the committee, it will run only about $5,600,000,000 a year, plus an unspecified extra amount to care for the indigent and to provide for new hospital, laboratory, and research center construction. This is the sum figured by Government acturial experts."

* * * * *

What is the other side of the picture; the case which many of us think counterbalances the arguments previously outlined? Let us examine these statements, point by point.

1. DRAFT FIGURES—As for draft statistics, any casual analysis will show that a majority of rejections were occasioned by factors on which improved medical care would have had no effect—factors such as illiteracy, subnormal mentality, defective personality, and various disease conditions which medical science has not yet learned to prevent or cure.

We fail to see that the nation's health is in a deplorable state. The doubling of life expectancy since the turn of the century, the markedly lowered mortality figures for all the preventable and curable diseases, do not substantiate pessimistic claims.

2. AMERICAN MEDICAL ASSOCIATION STATISTICS—It is difficult to see how figures on the

number of people now covered by voluntary plans can be very much inflated, or how, at this time, hopes for the future of such plans can be called "over-enthusiastic." After all, the statistics of Blue Cross, Blue Shield, and private insurance carriers are a matter of record and they show that at least sixty million people have some coverage. The rate of expansion is tremendous. Currently voluntary plans are adding people at the rate of 8,000,000 per year. There is every reason to feel that with proper education of the public an even greater majority of the population will be enrolled under one of the various plans within the next few years.

3. CAN'T AFFORD IT—Through mutual cooperation and concession by both the medical profession and insurance carriers, progress is constantly being made in broadening benefits and seeing to it that more complete coverage is offered. Any family that can afford a pack of cigarettes a day or a weekly movie can afford to purchase protection that will take most of the sting out of the cost of medical care. Should it then be a function of Government to force protection on all of us, at the expense of all of us, to take care of a segment of the population which is too lacking in initative and foresight to voluntarily do something for themselves?

4. CHARITY CARE—It seems to me that, for the totally indigent and the chronically ill, Government may have to assume responsibility free from the stigma of charity, preferably at a state level. However, this is a far cry from universal inclusion of the whole populace in a Federal Government plan. It is also recognized that Government has a necessary place in financing new hospital construction. It should be encouraged also to continue and to expand its public health work. These are problems where governmental participation is necessary.

5. COMPULSORY HEALTH INSURANCE AND SOCIALIZED MEDICINE — Theoretically, compulsory health insurance is not socialized medicine. However, bureaucratic forces, once entrenched, never voluntarily recede. As surely as day follows night, dependence of the medical profession on the funds collected and disbursed by the State would, in a short time, lead to full subjugation. New directives would soon flow from Washington which would make it necessary for every doctor, in the interest of his own economic self-preservation, to restrict his activities to a definite panel of patients, and for patients in turn to consult only one particular doctor. Freedom of choice would soon be lost and medicine on the assembly line would be with us.

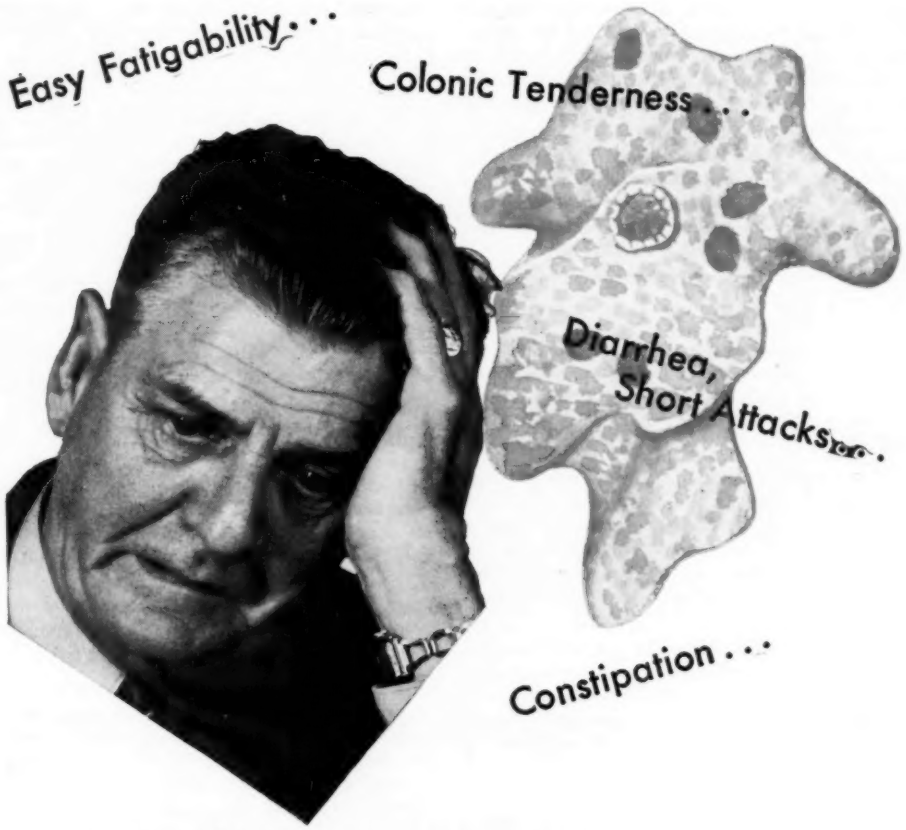
There are many people, who, although perfectly healthy, love to talk to a doctor about imaginary complaints; and if they can get a shot of the newest medicine or can boast to their friends about how "the doctor x-rayed me from top to bottom," so much the better. Once open the floodgates to 150 million people, there is no limit to the financial burden forced upon each and every one of us, or to the lowering of quality of medical care given those who really are sick. When the time comes, as it will under compulsory health insurance, when the local Governmental agent can say to the doctor, "Look Doc, this guy's important in this district. You'd better give him his x-rays and basal metabolism test even if they aren't necessary," then we'll have arrived at socialized medicine, which means inferior medicine. Federal control of the purse is the essential first step toward complete control.

6. SOCIALIZED MEDICINE IN OTHER COUNTRIES—The situation in Britain under socialized medicine is not quite as bad as had been pictured in certain more reactionary publications. However, the cost of the first year of operation was double the original estimate. Doctors' offices are crowded with long queues of patients. Many physicians are trying to see fifty or sixty patients in a morning, when much of their time is consumed in filling out government forms. Granted, some people are getting cursory treatment who might have had none before; many others are receiving a brand of medical care much inferior to what would have been dispensed two years ago.

7. COST—Most insurance actuaries who have studied the problem feel that the Government's estimate of $5,600,000,000 is much too low. In Germany and Britain it has been found that, for every hundred persons insured under socialistic schemes, one employee is needed to administer the plan. This means potentially an additional army of a million and one half Federal employees in this country. This, together with the heavy unnecessary demands by certain segments of the population for medication and services, leads to estimates that the cost to this country might eventually be over $10,000,000,000 annually. The worker who can afford the payroll tax (plus the increase in general income tax) necessary to cover such a sum could certainly afford to buy voluntary protection.

For example, consider the optimistic estimate of the Fair Dealers that their plan would cost only $5,600,000,000 a year. That would be $136 for each family in the country. That sum is almost precisely double the cost of hospitals and surgical coverage under one of the most popular voluntary plans. Our opinion, of course, is that the Administration's estimates of cost are unrealistic; that the cost will be nearer $10,000,000,000 a year. That means the average family, under the Government medicine program, would be paying more than three times as much as the cost of a voluntary plan.

To sum up then, why should a healthy, progressive America import socialized medicine from a poor, sick Europe? Probably the answer lies in the combination of misguided humanitarianism and a desire for votes and power.



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RESEARCH IN THE SERVICE OF MEDICINE **SEARLE**

American medicine and its allies feel that voluntary plans sponsored by nonprofit groups and by private insurance carriers, together with plans initiated by state medical societies working with both profit and nonprofit organizations, can do the job and should be given a fair chance to prove it.

To Comrade Lenin is attributed the following: "Socialized Medicine is the keystone to the Arch of the Socialist State." This should give the American people reason to think twice and maybe a third time, before submitting to compulsory health insurance.

A JOB FOR THE A. M. A.*

For reasons which may have been logical and valid at the time, the American College of Surgeons thirty-five years ago assumed the responsibility for the evaluation and standardization of medical practice in hospitals.

At that time the American Medical Association had but recently established its Council on Medical Education and Hospitals. It would have seemed that the logical body to undertake hospital standardization was this agency of the American Medical Association. But the task was assumed by the American College of Surgeons.

Though some of the reasons for this have been lost in the erosion of history, others will be readily apparent. Modern surgery was then less than fifty years old. The majority of hospitalized patients were surgical cases. The bulk of medical cases was cared for in the patient's home, and only in recent years have beds in medical and obstetric wards exceeded the number in the surgical ward of the typical general hospital. Elevation and standardization of surgical practice was then a crying need.

To its everlasting credit, the American College of Surgeons achieved, through its program in hospital standardization, effective control of surgical practice in hospitals and enormous progress in other phases of hospital administration. Partly as a result of this program, the modern hospital is today an essential adjunct to modern medical and surgical practice. It provides the plant, equipment, and technical personnel demanded by the vast progress and enormous complexity of present-day medicine.

But conditions have changed. Today the internist, the general practitioner, the obstetrician, and all other special groups have interests equal to those of the surgeons in maintaining proper standards and safeguards in the hospital. It is not surprising therefore that the House of Delegates of the American Medical Association has considered within the past ten or fifteen years several proposals that the entire responsibility for the evaluation and standardization of medical practice in hospitals be assumed by its Council on Medical Education and Hospitals. It was argued that this body alone was representative of the entire profession and that only through such an agency could all interested groups obtain fair consideration of their respective views and principles.

Having expended large sums of its own money on a program that was of importance and value to the entire profession as well as to the public welfare, the American College of Surgeons came to the decision early last spring that the responsibility of financing the program should be assumed by some other more widely representative body. One would have expected at this juncture that the American College of Surgeons would have approached the American Medical Association with the request that it take over the program. Surprisingly enough, the American College of Surgeons entered discussions instead with the American Hospital Association. It was only after several conferences and the consideration of tentative proposals that the American Medical Association entered the discussion.

Shortly thereafter, the American Hospital Association House of Delegates enacted a resolution instructing its Board of Trustees to take over the program formerly conducted by the American College of Surgeons. Meanwhile the American College of Surgeons has announced that it will continue with the program until a compromise solution satisfactory to the three interested parties can be effected.

At the December meeting of the House of Delegates of the American Medical Association, the Board of Trustees reported that these discussions were continuing and announced that they revolved about a proposal for the creation of an eighteen-man committee to supervise and direct the program, six members of which would be from the American Medical Association, three from the American Hospital Association, three from the American College of Surgeons, and three from the American College of Physicians.

When hearings were conducted on this report by the reference committee of the House of Delegates, an alternative proposal introduced in a resolution by the Texas delegation was also considered. The latter proposal demanded that the entire program be assumed by the American Medical Association through its Council on Medical Education and Hospitals. It was pointed out that the Council was equipped both with personnel and experience to assume the program and that, indeed, much of its activity in the field of intern and residency approval overlapped the activities presently conducted by the American College of Surgeons. But, for some inexplicable reason, it was stated during the hearings that the American College of Surgeons was unwilling to turn the program over to the American Medical Association.

While it may be granted the American Hospital Association has a legitimate interest in the matter of hospital standardization and that it is entitled to a voice in the conduct of the program, no good reason why the primary responsibility for hospital standard-

*Editorial, GP Journal, March 1951.

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ization should not be vested in the Council on Medical Education and Hospitals has as yet been advanced.

Undoubtedly this question will be reconsidered when the House of Delegates meets again in Atlantic City next June. Meanwhile members of the American Medical Association may well ponder the merit of the two alternatives considered at the December meeting. The American Medical Association is the only organization representative of the entire medical profession in America. Why should it not assume the sole authority and responsibility for the evaluation and standardization of hospital medical practice? What good reason exists for the creation of a joint committee including representatives not only from the American Medical Association and the American Hospital Association—which, as we said, admittedly has a legitimate interest—but two subsidiary medical organizations?

Should the American Medical Association borrow a card from the shuffled deck of Washington bureaucracy? Why should a super agency be created when the American Medical Association is the logical and proper body to assume this function and is equipped to do it?

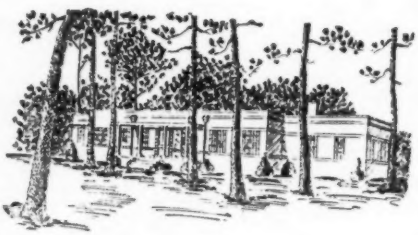
NEW BILL ON FEDERAL AID TO MEDICAL EDUCATION*

HR2152 was introduced on January 29, by Mr. Burnside of West Virginia. This new bill is designed to promote the national defense and security by providing for a temporary program to aid in relieving the shortage of physicians and other health personnel. It was referred to the Committee on Interstate and Foreign Commerce.

This bill contains three main divisions: (1) $150,000,000 in federal funds would be authorized over the next five years as grants for defraying all or part of the cost of construction and equipment of new medical schools (medical schools here means schools of medicine). Single grants are limited to $150,000,000. Grants made under this section are conditioned upon the school providing admission to out-of-state students. Permission is given to a compact between one or more states to operate a school constructed with federal funds. It is required that within a radius of 30 miles of the proposed school there are, at the time of the grants, facilities containing at least 550 teaching beds. (2) There is authorized $30,000,000 in federal funds each year for the next 4 years for the purpose of making grants for construction and equipment to assist in the improvement and expansion of existing "health profession schools" ("health profession schools" here means schools of medicine, dentistry, public health, nursing or other schools for the education and training of health personnel, including teaching hospitals and other facilities related

*Connecticut State Medical Journal, March 1951.

Carolina Rest Home Hospital



A COMPLETELY NEW FIREPROOF HOSPITAL—SPECIALIZING IN THE TREATMENT OF NERVOUS DISORDERS AND ALCOHOLIC PROBLEMS WITH A PERSONAL FOLLOW UP.

P. F. LaBORDE, M. D.
MEDICAL DIRECTOR

U. S. #1 South, Box 188
WEST COLUMBIA, S. C.

to such schools). Grants under this section shall not be in excess of 30 per cent of the cost of construction and equipment. Those receiving benefits under this section must provide reasonable opportunity for the admission of out-of-state students. (3) Provision is made that if a part of the funds provided under the above two type grants is to be used in the construction of hospital facilities, application first must be made under the Hill-Burton Act and refused for one or more of the following reasons: (a) the project has insufficient or no priority; (b) the project is not included in the state hospital construction program; or (c) funds are not available from the state's regular hospital construction allotment. Grants made under this title are subject to the same matching proportions as under the Hill-Burton Act but will be made from appropriations authorized by this bill and not from the Hill-Burton funds. Construction authorized under this bill would not reduce the unobligated portion of the state's allotment under the Hill-Burton Act.

All three of the above programs would be administered by the Surgeon General of the Public Health Service, under regulations prescribed by the Surgeon General with the approval of the Council. A "National Council on Professional Health Education" is established, made up of the Surgeon General, the Commissioner of Education, both of the Federal Security Agency, as ex officio members, and eleven others not in the full time employment of the federal government, to be appointed by the President—three members from a panel of nine submitted by the Association of American Medical Colleges; three members from a panel of nine submitted by the American Association of Dental Schools; three members from a panel of nine submitted by the National League of Nursing Education; and two to be appointed from among individuals outstanding in the field of health sciences. In the event either of the three mentioned organizations fails to nominate a panel within 90 days the appointments will be made without their advice. Provisions are designed to restrict federal government supervision and control in respect to personnel, curriculum, instruction, methods of instruction, materials of instruction, or the administration of any educational institution.

†Mr. Burnside, M. C. from West Virginia who introduced the bill under discussion is a brother of Dr. A. F. Burnside of Columbia, S. C.

DEATHS

ROBERT B. TAFT

Dr. Robert B. Taft, 51, eminent roentgenologist, died at his home in Charleston on April 16, 1951.

A native of Charleston, Dr. Taft received his education at the College of Charleston and at the Medical College of the State of S. C. (Class 1923). Following special study at the Universities of Michigan and Vienna, he returned to his native city where he engaged in the practice of roentgenology. Over the years he gained recognition as one of the eminent members of his specialty. On three occasions he received awards for his work from the American Roentgen Society and he was the author of various scientific papers. He gained great publicity through his efforts as a "radium hound," and subsequently described his experiences in a book, "Radium, Lost and Found." In 1949 he was appointed a consultant for the Institute of Nuclear Studies at Oak Ridge. In addition to all of this, he served for a number of years as professor of radiology at the Medical College and carried on an extensive radiological practice.

But Bobby, as he was known to his colleagues, was more than a radiologist and a physician, he was a genial companion and a loyal friend. His boundless energy, his keen sense of humor, his genial personality drew others to him. In his passing the physicians of Charleston and his colleagues throughout the state have lost one of their finest friends.

NEWS ITEMS

Dr. George R. Wilkinson, Dr. Keitt Smith and Dr. John A. Ritchie, all of Greenville, recently attended a meeting of the Tenth District Medical Society at Lake Lure, North Carolina. Dr. Wilkinson presented a paper on "An Approach to the Problem of Amebiasis."

Dr. Robert P. Jeanes, Ophthalmologist, formerly of Easley who was called to active duty with the medical corps of the army in September 1950, was released from duty on March 29, 1951. His release was based on Easley's need for his specialty where he has reopened his offices for practice.

Dr. Walter Ellis Bryant of Hemingway was presented the "Outstanding Citizen for 1950" award by the Junior Chamber of Commerce at a recent Ladies' Night meeting.

Dr. W. A. Woodruff of Spartanburg County has recently been appointed an honorary trustee of the Medical College until 1961. The appointment was made by Governor Byrnes and gives Dr. Woodruff the same powers as other trustees.

Dr. O. Z. Culler of Orangeburg has been elected to the board of trustees of the Orangeburg Hospital.

Dr. T. G. Herbert has returned to Charleston from the Navy, and has resumed his association with Dr. Patricia Carter in the practice of obstetrics and gynecology.

The following trustees of the Medical College were unanimously re-elected by the General Assembly recently: Drs. E. H. Barnwell, A. F. Burnside, F. L. Martin and J. M. Pratt.

Dr. Prentiss M. Kinney of Bennettsville, was recently elected President of the Rotary Club of that city.

BIRTH ANNOUNCEMENTS

Dr. and Mrs. David F. Adcock of Columbia have announced the birth of a daughter, February 27, 1951.

Dr. and Mrs. J. E. Hodge of Cheraw, also have a new daughter.

Dr. and Mrs. W. O. Tanner of Columbia, report the birth of a son.

WOMAN'S AUXILIARY
SOUTH CAROLINA MEDICAL ASSOCIATION

President: Mrs. A. F. Burnside, Columbia, S. C. **Publicity Secretary: Mrs. Weston Cook, Columbia, S. C.**

PRESIDENT'S MESSAGE

The closing days of the 1950-1951 administration of the Woman's Auxiliary to the South Carolina Medical Association finds your president humbly grateful for the enlightening experiences of the past year. All over the State I have found Auxiliary members warmly receptive to the work of the organization. You have extended to me your friendly hospitality and have shared with me your successes and disappointments. Everywhere I have received encouragement and inspiration by your cooperation and interest. Any achievements that the Woman's Auxiliary may have accomplished this year are due to your enthusiastic efforts.

Your state officers and committee chairmen have given unreservedly of their ideas, their time, and their experience to make the work of the Woman's Auxiliary a substantial contribution to the medical program of the State. We have endeavored to link our program of work with national channels and at the same time, to maintain a program congruous with the needs and aims of the local groups. The splendid cooperation of our District and County Auxiliary presidents, officers, and committee chairmen has extended in scope and intensity the effectiveness of our State Auxiliary work. To all of those who have taken the responsibility for designated work I am especially grateful.

It is with a feeling of security and confidence that we hand the gavel of authority to our President-Elect, Mrs. Kirby D. Shealy. After I have worked so closely and so pleasantly with Mrs. Shealy this year, I can assure you that State Medical Auxiliary work for the coming year rests in capable and conscientious hands. She will furnish able leadership; from you I covet for her the same interest and willing assistance that have so greatly aided me in directing the work of the Woman's Auxiliary for this year. It has been a pleasure to work and plan with Mrs. Shealy, and to her I pledge my continued cooperation.

Year by year, through experience and sincere desire on the part of the women to give practical application to the ideals of medical service, the work of the Woman's Auxiliary has been projected; its concepts of growth and development have been crystallized into sound, workable programs. It is my sincere hope that this administration has left some contribution, some adaptation of principle that will prove foundation material for further growth.

To our President-Elect, Mrs. Shealy, go the responsibility and privilege of interpreting for us and for the public the work of the Woman's Auxiliary to the South Carolina Medical Association. In her behalf, I ask your continued cooperation and support.

Mrs. Alfred F. Burnside, Pres.
Woman's Auxiliary to the S. C.
Medical Association.

FOR SALE

Modern office equipment of the late Dr. L. R. Kirkpatrick. Includes X-ray machine, microscope, Hamilton examination table, odd instruments, etc. If interested write or telephone Mrs. L. R. Kirkpatrick, Ware Shoals, South Carolina,—Telephone 3503.

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SOUTHERN PEDIATRIC SEMINAR

SALUDA, N. C.

1951 Session

Pediatrics—July 16-28

Obstetrics—July 30 - Aug. 4

FOR DETAILED INFORMATION, WRITE

DR. D. L. SMITH, SPARTANBURG, S. C.

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480 mg.	750 mg.	per qt.
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1. Gardner, L. I., Butler, A. M., et al.: *Pediatrics* 5:228, 1950.
2. Nesbit, H. T.: *Texas State J. M.* 38:551, 1943.
3. Dodd, K., and Rapoport, S.: *Am. J. Dis. Children* 78:537, 1949.
4. Recommended Daily Dietary Allowances, Revised 1948, Food and Nutrition Board, National Research Council.

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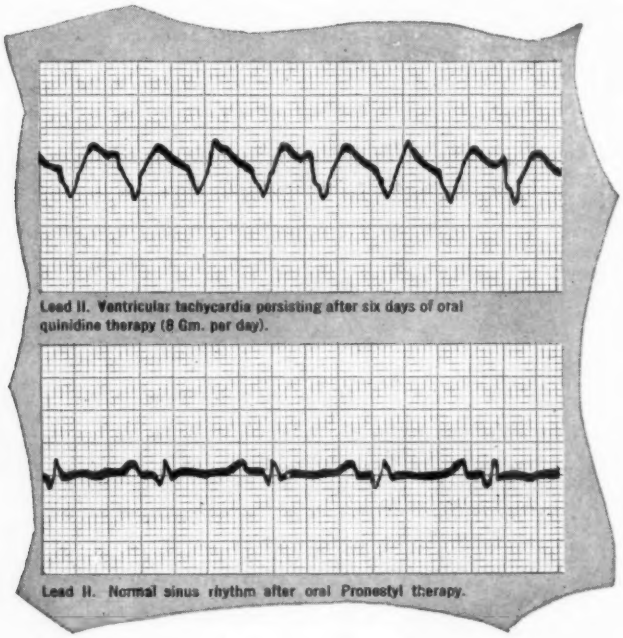

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